



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



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*Mineral planning information at BGS*

Andrew Bloodworth





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# MineralsUK

**Centre for sustainable mineral development**

- A global leader in the compilation, provision and analysis of mineral statistics
- The major UK national provider of spatial and statistical minerals information.
- Carries out research in areas such as metallogenesis, land-use impacts of mineral extraction and geomaterials.
- Part of the British Geological Survey's Economic Minerals Programme
- [www.mineralsUK.com](http://www.mineralsUK.com)



# Minerals and society



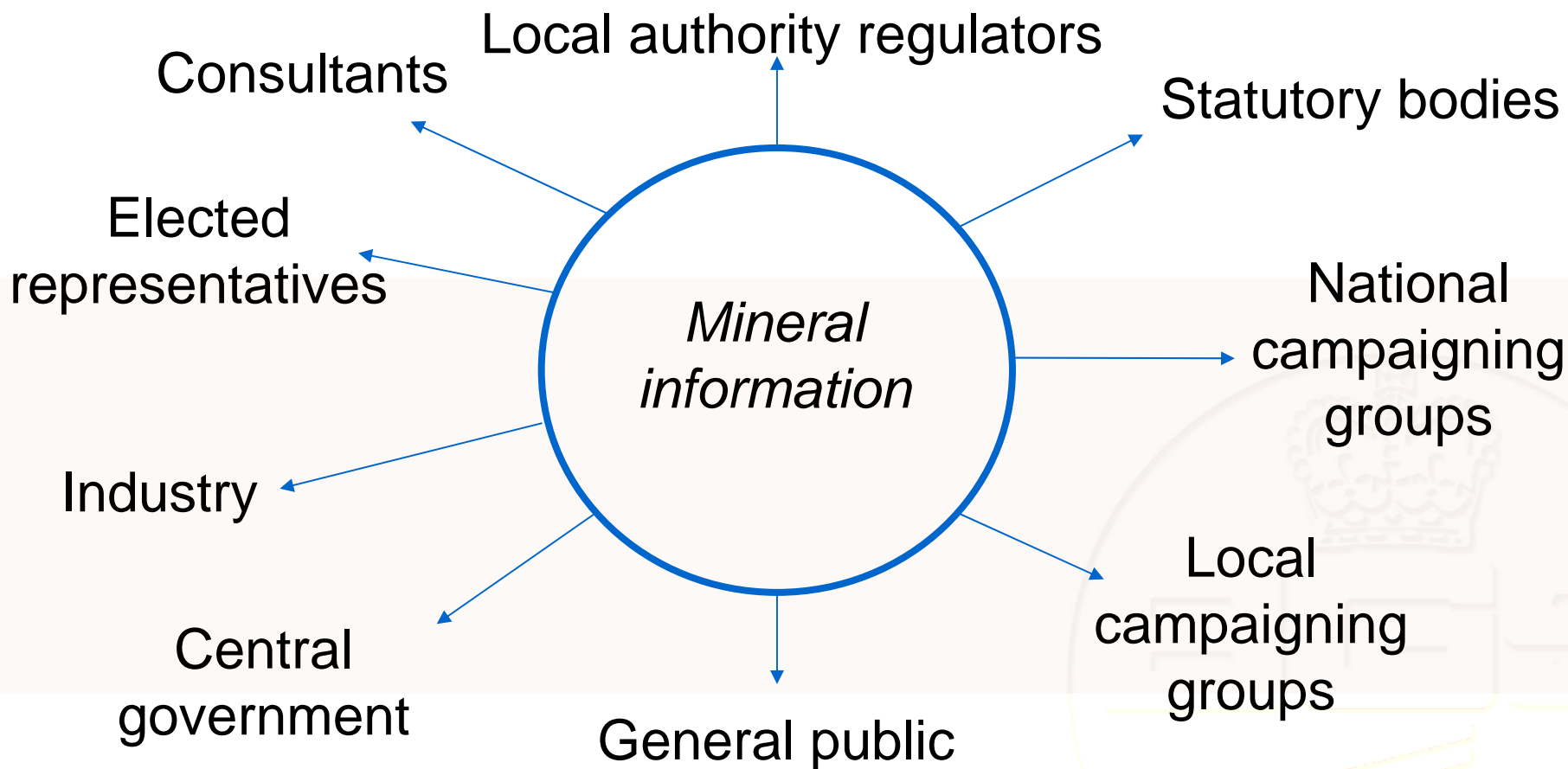
- Minerals are essential for development of the Scottish, UK and global economy and for maintaining our lifestyle

but...

- Extraction, processing and transport creates significant environmental and social impact;
- mineral operations can be very contentious;
- issues related to minerals often divisive and politically sensitive;
- debate is often ill-informed.



# Stakeholders







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# Minerals Information Online

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Centre for sustainable mineral development

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Planning | Digital maps | Mine & quarry | Commodity statistics | Exploration | Environment

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**Welcome to Minerals UK**

MineralsUK is the British Geological Survey's Centre for Sustainable Mineral Development. This website will give you a wealth of information on mineral resources, mineral planning, policy and legislation, sustainable development, statistics and exploration. To find out more about us and our work in economic minerals [click here](#). Enjoy your visit.

What's new

Popular pages

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International



**New >** With the addition of North West England Region to UK Minerals Online, we



**Mineral Planning Factsheets >** A series of factsheets for everyone



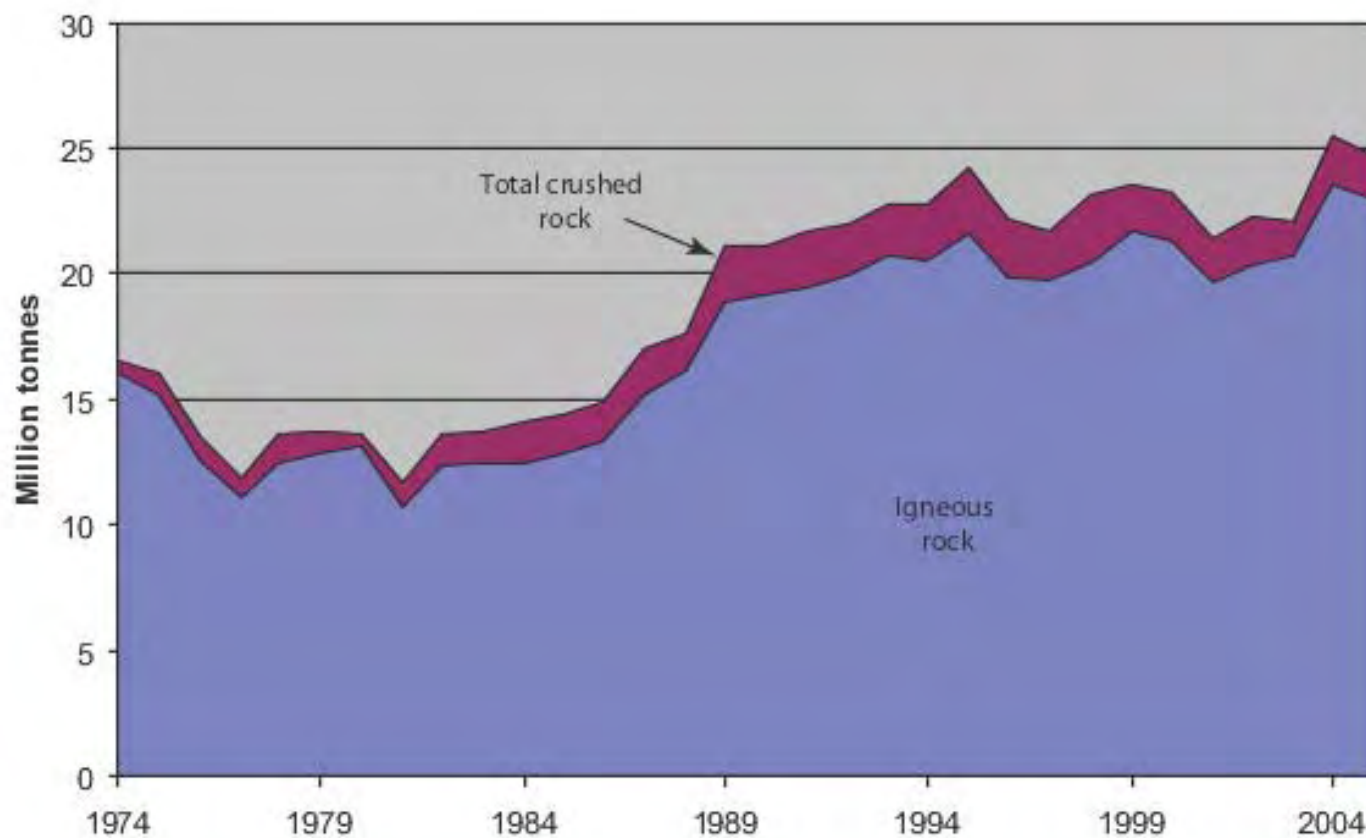
**Industry news >** A news summary for the UK minerals industry, including archived



**New >** United Kingdom Minerals



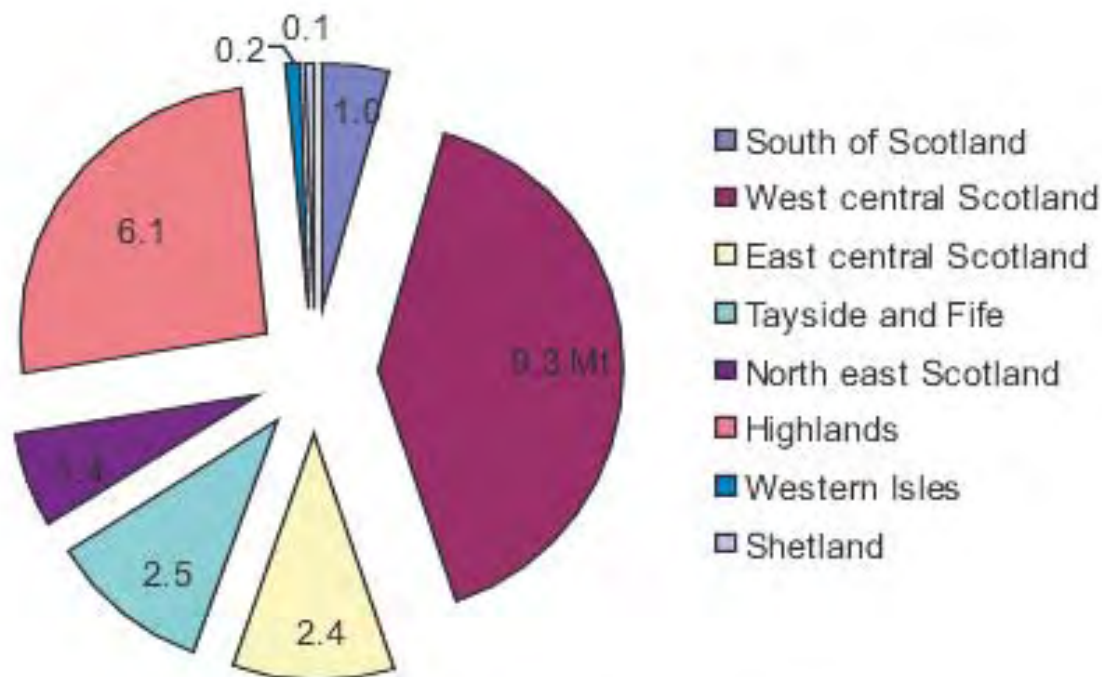
# Statistical data (1)



Crushed rock  
production in  
Scotland  
1974-2005



# Statistical information (2)



Total sales 22.9 million tonnes

Crushed rock  
production in  
Scotland by  
region 2005



# Mineral planning factsheets

## Limestone

*This factsheet provides an overview of industrial limestone supply in the UK. It is one of a series on economically important minerals that are extracted in Britain and is primarily intended to inform the land-use planning process.*

January 2006

*Dowling Quarry, Derbyshire.*

Limestone

## Fluorspar

*This factsheet provides an overview of fluorspar supply in the UK. It is one of a series on economically important minerals that are extracted in Britain and is primarily intended to inform the land-use planning process.*

January 2006

*Fluorspar working in Derbyshire.*

Fluorspar

## Construction aggregates

*This factsheet provides an overview of aggregate supply in the UK. It forms part of a series on economically important minerals that are extracted in Britain and is primarily intended to inform the land-use planning process.*

November 2005

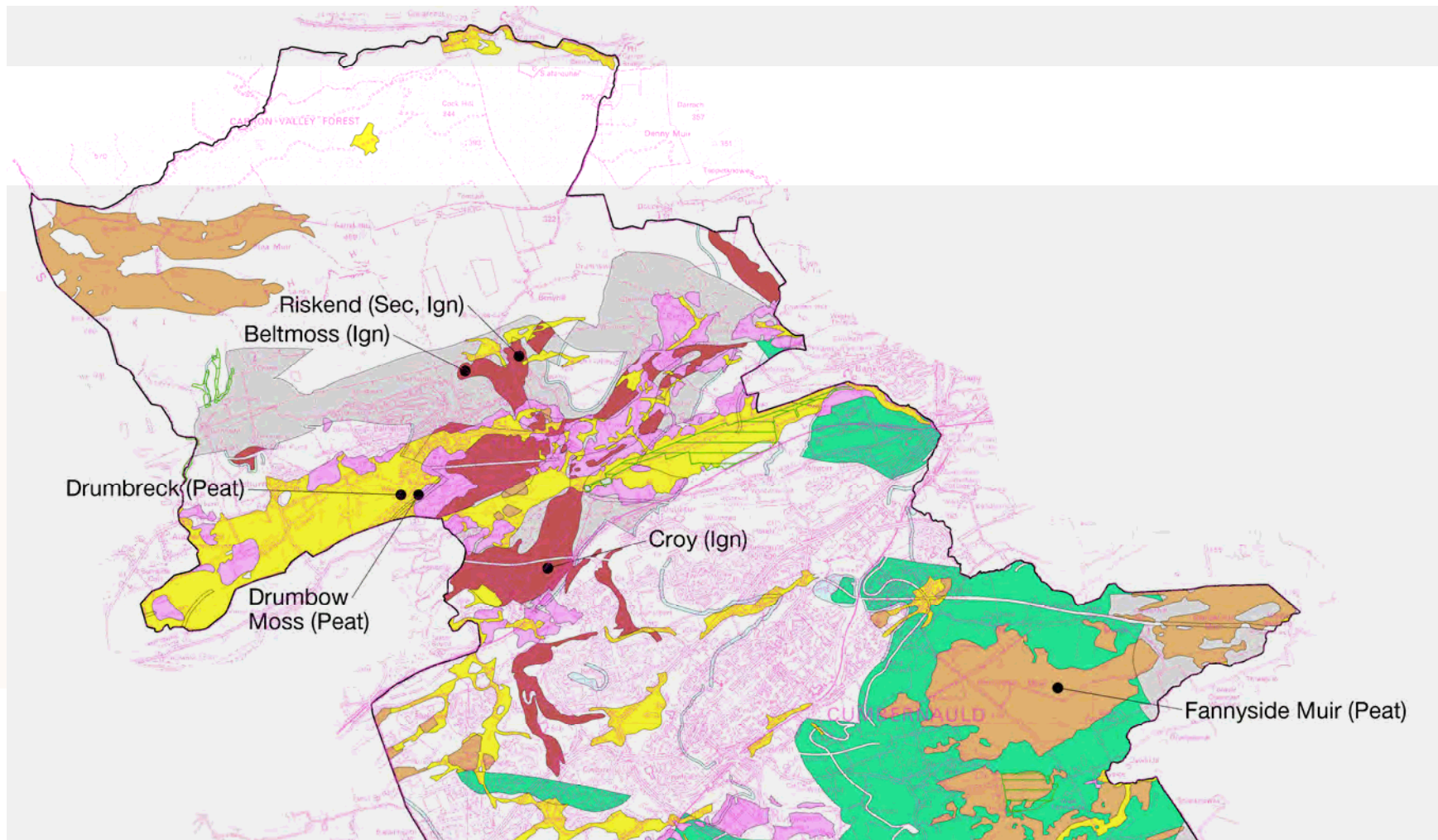
*Gravel aggregate.*

Aggregates





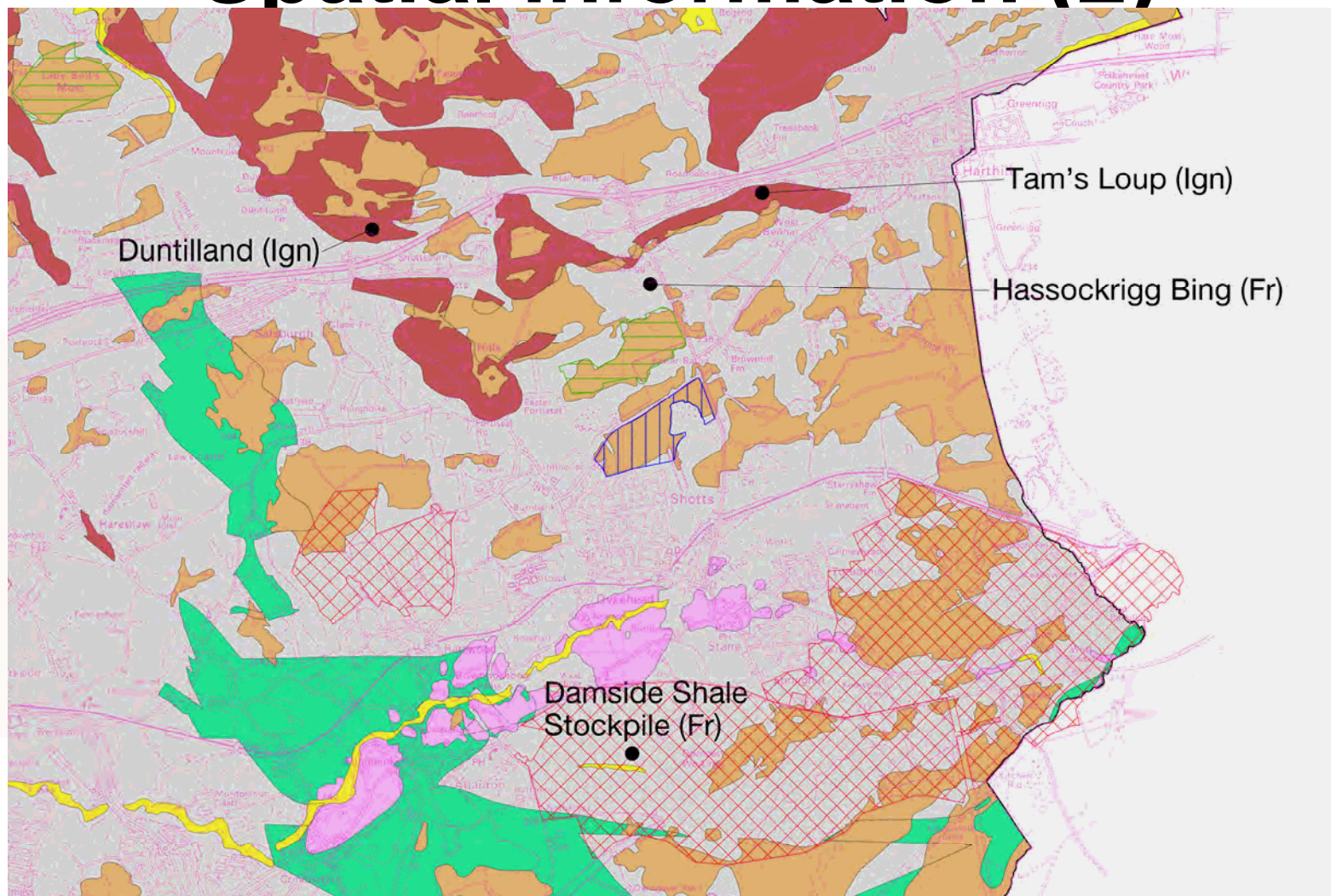
# Spatial information (1)







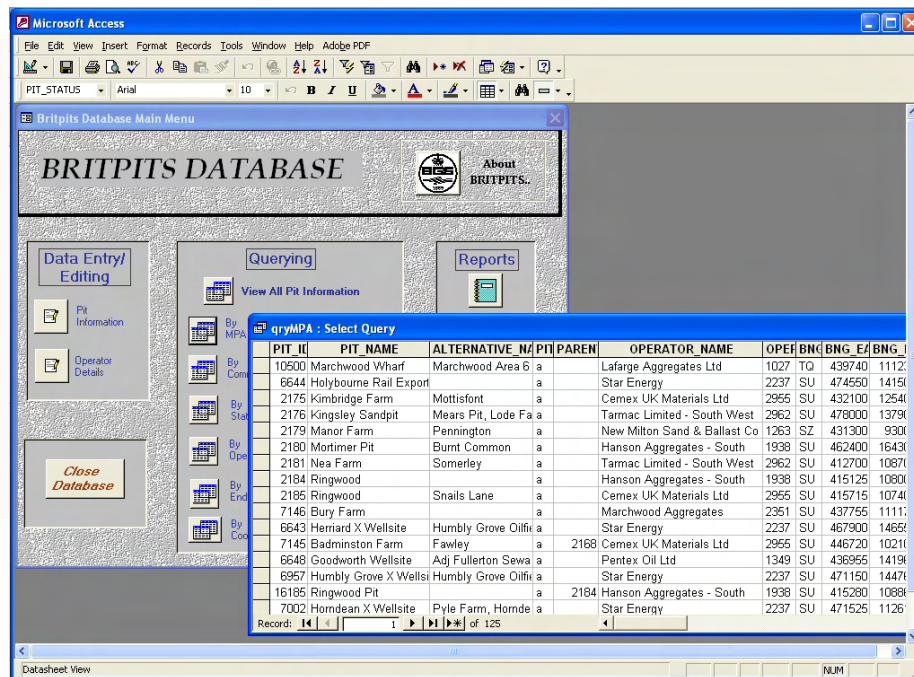
# Spatial information (2)





# Mines and Quarries Database (BRITPITS)

Data on 18,000 mines and quarries

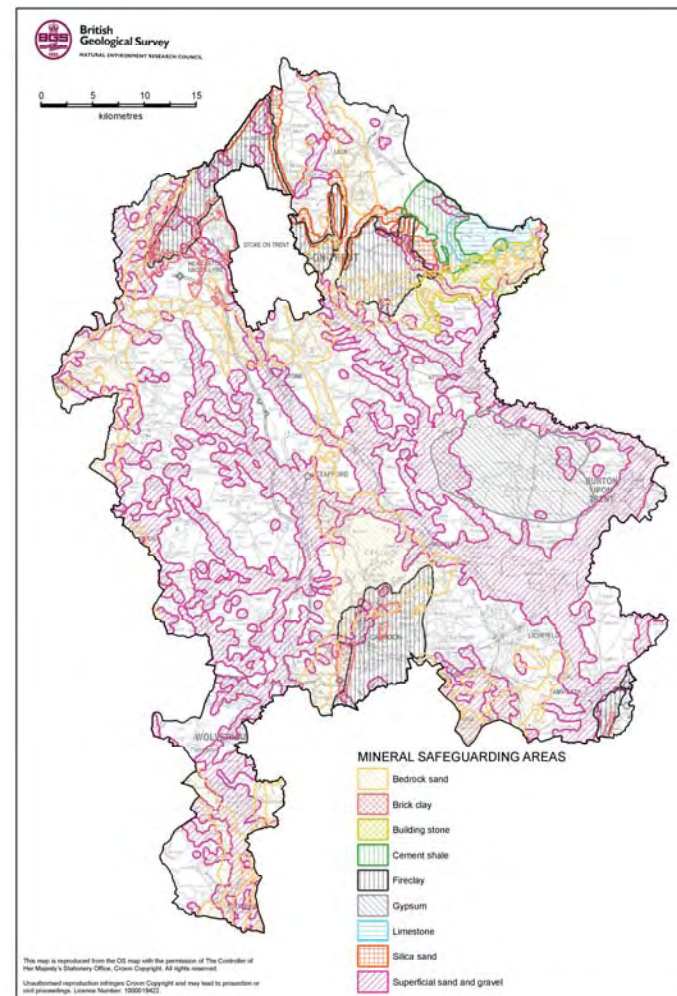






# Mineral Safeguarding

- The cumulative impact of constraints means that options are reducing and will reduce further in the future.
- We are in danger of sterilising known resources by inappropriate development.
- Sterilisation can divert extraction to other, perhaps more sensitive or costly, locations.





# More sustainable transport?





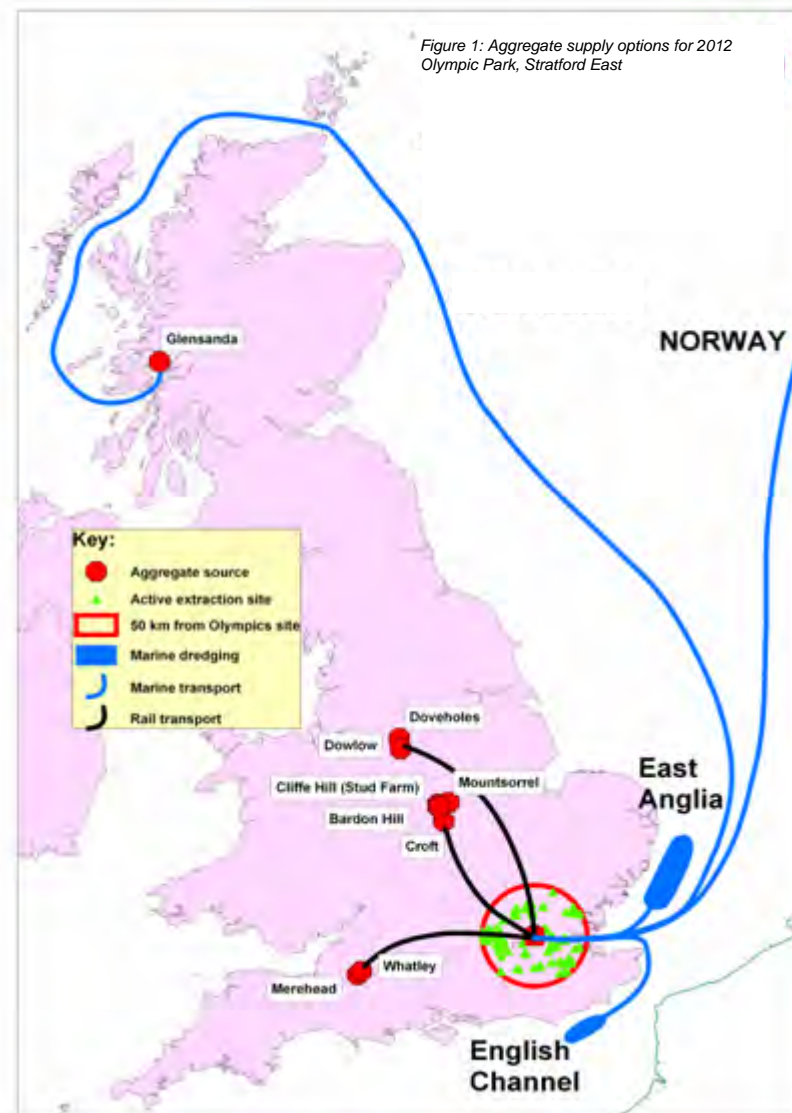
# Aggregate transport carbon footprint

| Mode                       | g CO <sub>2</sub> / tonne/ km |
|----------------------------|-------------------------------|
| Road (HGV)                 | 160                           |
| Rail                       | 41                            |
| Water (inland and coastal) | 25                            |

Table 1. Carbon emissions from different aggregate minerals transport options (Source: European Commission)

| Resource                                | Location                   | Approximate haul distance (km) | Transport mode | Approximate Kg CO <sub>2</sub> emitted over journey/tonne aggregate |
|---|----------------------------|--------------------------------|----------------|---|
| Thames terrace onshore sand and gravel  | London & Home Counties     | 50                             | Road           | 8.0   |
| Thames terrace offshore sand and gravel | Offshore E Anglia          | 150                            | Sea            | 3.7   |
| Solent River terrace sand and gravel    | East English Channel       | 200                            | Sea            | 5.0   |
| Granite                                 | Glensanda, Highland Region | 1500                           | Sea            | 37.5  |
| Carboniferous Limestone                 | Derbyshire Peak District   | 250                            | Rail           | 10.2  |
| Carboniferous Limestone                 | Somerset                   | 190                            | Rail           | 7.8   |
| Granite                                 | Leicestershire             | 180                            | Rail           | 7.4   |
| Larvikite                               | Norway                     | 1100                           | Sea            | 27.5  |

Table 2. Estimated carbon footprint of different aggregate supply scenarios for construction of the 2012 Olympic Park at Stratford East.







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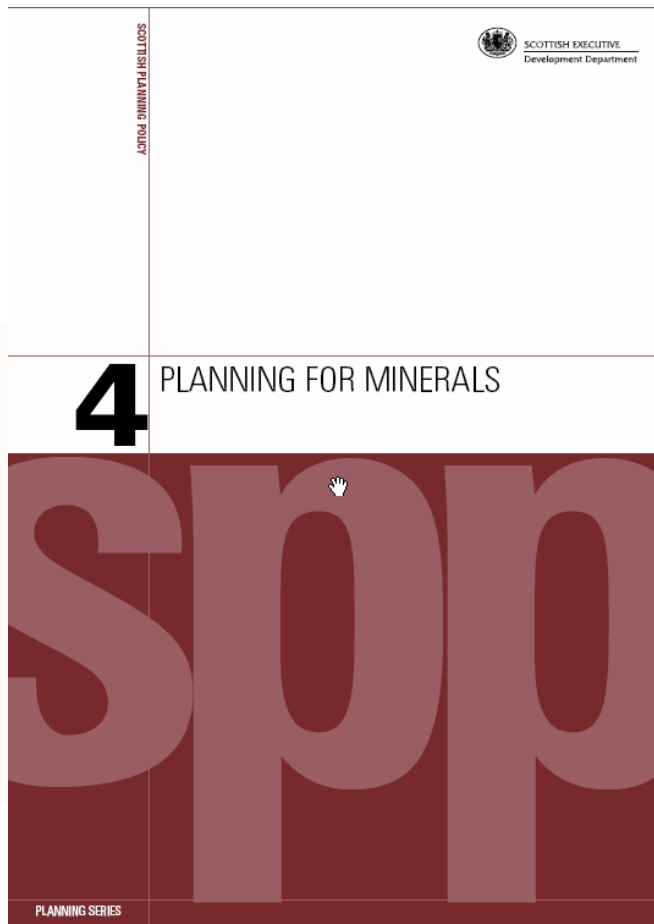
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# Planning for minerals





# Towards a better planning system



- An efficient planning system is vital to the economy and protection of the environment.
- The planning system has to balance the many different pressures on the use of land and between conservation and development.
- Access to and interpretation of high quality data and information allows more informed debate and should lead to balanced judgements.





# SPP4: Planning for Minerals



- recognises that minerals are vital to the economy and that they are the foundation of the built environment
- recognises that minerals can only be worked where they are found
- recognises that mineral working may have an impact on local communities and the environment
- recognises the need for aggregate minerals landbank and the importance of safeguarding
- promotes a positive and holistic approach to mineral planning





# SPP4: objectives for mineral working



- where possible, safeguard for future use
- maintain steady and adequate supply to meet needs of society and economy
- set high environmental standards for working and restoration
- promote use of secondary and recycled material
- protect designated areas from adverse impacts
- minimise negative impacts on communities



# Environmental justice

- ‘Communities should be afforded protection from the adverse effects of developments within close proximity, that may have a significant impact on them or their environment.’
- ‘A key element of environmental justice is to ensure that **accessible information** and opportunities to participate in decision making are provided in order to shape the environments in which communities are situated.’







# SPP 16: Opencast Coal



- recognises that coal has a role in maintaining the diversity of the energy 'mix'
- recognises that extraction of shallow coal has particular environmental impacts
- encourages the identification of areas where extraction 'may be acceptable' but requires careful assessment of impacts and benefits of extraction on the environment and communities within these areas



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